AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An optical network which is formed by a plurality of optical network transmission apparatuses and a plurality of transmission lines that connect the optical network transmission apparatuses, characterized in that

each optical network transmission apparatus comprises

advertisement means for autonomously advertising a usable wavelength in a transmission line connected to the apparatus, and

collection means for autonomously collecting a usable wavelength in a transmission line that is advertised by another apparatus, wherein the plurality of optical network transmission apparatuses cooperate together to form a usable path determined from shared information that has been advertised and/or collected by the optical network transmission apparatuses of the network.

2. (Original) A network according to claim 1, wherein said advertisement means comprises notification means for notifying another apparatus adjacent to the apparatus of the usable wavelength in the transmission line connected to the apparatus and the usable wavelength in the transmission line that is collected by said collection means.

3. (Previously Presented) A network according to claim 1, wherein the optical network transmission apparatus further comprises route calculation means for calculating a route of an optical path on the basis of the usable wavelength in the transmission line connected to the apparatus and the usable wavelength in the transmission line that is collected by said collection means.

4. (Previously Presented) A network according to claim 1, wherein the optical network transmission apparatus comprises

wavelength management means for managing the usable wavelength in the transmission line connected to the apparatus, and

wavelength update means for updating the usable wavelength managed by said usable wavelength management means when an optical path is set in the transmission line connected to the apparatus.

5. (Currently Amended) An optical network transmission apparatus in which the apparatus and other adjacent apparatuses are connected by transmission lines in a network, characterized by comprising:

advertisement means for autonomously advertising usable wavelengths in the transmission lines connected to the apparatus; and

collection means for autonomously collecting usable wavelengths in transmission lines that are advertised by said other apparatuses, wherein the optical network transmission apparatus and the other adjacent apparatuses cooperate together to form a usable path determined from shared information that has been advertised and/or collected by the optical network transmission apparatus and other adjacent apparatuses of the network.

6. (Original) An apparatus according to claim 5, wherein said advertisement means comprises notification means for notifying said other apparatuses of the usable wavelengths in the transmission lines connected to the apparatus and the usable wavelengths in the transmission lines that are collected by said collection means.

7. (Previously Presented) An apparatus according to claim 5, further comprising route calculation means for calculating a route of an optical path on the basis of the usable wavelengths in the transmission lines connected to the apparatus and the usable wavelengths in the transmission lines that are collected by said collection means.

8. (Previously Presented) An apparatus according to claim 1, further comprising:

wavelength management means for managing the usable wavelengths in the transmission lines connected to the apparatus; and

wavelength update means for updating the usable wavelengths managed by said usable wavelength management means when an optical path is set in the transmission lines connected to the apparatus.

9. (Currently Amended) A distributed routing control method in an optical network which is formed by a plurality of optical network transmission apparatuses and a plurality of transmission lines that connect the optical network transmission apparatuses, characterized by comprising the step of causing each optical network transmission apparatus to autonomously advertise a usable wavelength in a transmission line connected to the apparatus, and autonomously collect a usable wavelength in a transmission line that is advertised by another apparatus, wherein the plurality of optical network transmission apparatuses cooperate together to form a usable path determined from shared information that has been advertised and/or collected by the optical network transmission apparatuses of the network.

10. (Original) A method according to claim 9, wherein the advertisement step comprises the step of notifying another apparatus adjacent to the apparatus of the usable wavelength in the

transmission line connected to the apparatus and the collected usable wavelength in the transmission line.

11. (Previously Presented) A method according to claim 9, further comprising the step of calculating a route of an optical path on the basis of the usable wavelength in the transmission line connected to the apparatus and the collected usable wavelength in the transmission line.

12. (Previously Presented) A method according to claim 9, further comprising:

the step of setting an optical path along a route obtained by route calculation; and

the step of updating the usable wavelength in the transmission line connected to the apparatus.

13. (Currently Amended) A machine-readable recording medium which records a program of a distributed routing control method in an optical network which is formed by a plurality of optical network transmission apparatuses and a plurality of transmission lines that connect the optical network transmission apparatuses, characterized in that the program executes a process of autonomously advertising a usable wavelength in a transmission line connected to each apparatus, and autonomously collecting a usable wavelength in a transmission line that is advertised by another apparatus, wherein the plurality of optical network transmission apparatuses cooperate together to form a usable path determined from shared information that has been advertised and/or collected by the optical network transmission apparatuses of the network.

14. (Original) A medium according to claim 13, wherein the program executes, as the advertisement process, a process of notifying another apparatus adjacent to the apparatus of the usable wavelength in the transmission line connected to the apparatus and the collected usable wavelength in the transmission line.

15. (Previously Presented) A medium according to claim 13, wherein the program further executes a process of calculating a route of an optical path on the basis of the usable wavelength in the transmission line connected to the apparatus and the collected usable wavelength in the transmission line.

16. (Previously Presented) A medium according to claim 13, wherein the program further executes

a process of setting an optical path along a route obtained by route calculation, and

a process of updating the usable wavelength in the transmission line connected to the apparatus.